

REMARKS

In view of the above amendments and following remarks, reconsideration and further examination are requested.

In section 3 on page 2 of the Office Action, the Examiner objected to the drawings as being unclear and confusing. In section 4 on pages 2-3 of the Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the Examiner expressed that it was difficult visualizing what Applicants were reciting as the claimed invention. While the drawings are believed to be sufficiently clear and the specification is believed to be enabling, the following explanation is presented by way of example in an effort to aid the Examiner in appreciating what is the claimed invention.

Initially, the significance and a brief description of the invention will be provided, and then a correspondence between the claims and the drawings will be provided.

The purpose of the instant invention is to provide an apparatus that can allow a plurality of reactions to be carried out in parallel within a plurality of sealed chambers at elevated pressures. Thus, a goal of the present invention is to carry out a multitude of separate reactions producing a result, for example, in the form of a product, which can be analyzed. The success of each reaction within each individual chamber is dependent on control of the contents of the reacting species in the chamber. For such an apparatus to function, it is critical that each individual chamber is isolated from the other chambers, and that each individual chamber has a pressure tight seal. The absence of a pressure tight seal for each and every individual chamber would result in a number of undesirable consequences. These consequences include the fact that the contents of the chambers will be contaminated by contact with the contents of neighboring chambers through mixing by a vapor phase, and that concentrations of the contents of each chamber will change due to loss of material from the chamber via the vapor phase.

With regard to Figure 1, for example, these isolated chambers which are sealed in a pressure tight manner are provided by providing a block 2 having perforations 1 which are sealed at both ends by plates 7a and 7b cooperating with balls 4. The balls 4 seal the ends of the perforations 1 in a pressure tight manner, whereby a plurality of individual isolated chambers are provided.

With reference to claim 18, the "block" corresponds to element 2 in the drawings, and the "plural openings" correspond to features 1 in the drawings. The "closure member" corresponds to member 7b, along with members 4 as shown in Figure 1, members 5 as shown in Figure 3 or member 3b as shown in Figure 5a. And, the "locking device" corresponds to elements 11. Furthermore, member 7a with members 4 as shown in Figure 1, members 5 as shown in Figure 3 or member 3a as shown in Figure 5a, is attached to the bottom of element 2 via fasteners 9 to close the openings 1. This corresponds to the recitation in claim 18 that the plural openings are "closed at one end of said plural openings". Additionally, when member 7a is fastened to element 2 via fasteners 9 such that members 4, 5 or 3a close the openings 1, and when member 7b is fastened to the other side of element 2 via fasteners 11 such that members 4, 5 or 3b close openings 1, the space of each opening 1 defined between corresponding members 4, 5 or 3a and 3b define a reaction chamber.

With regard to claim 19, the "cover member" corresponds to member 7b, and the "seal member" corresponds to either members 4 as shown in Figure 1, members 5 as shown in Figure 3, or member 3b as shown in Figure 5a.

With regard to claim 20, openings 1 correspond to the "perforations that extend completely through said block". With regard to claim 24, the members 4 of Figure 1 can be fixed to element 7b, the elements 5 of Figure 3 can be fixed to member 7b, and the member 3b of Figure 5a can be fixed to member 7b.

With regard to claim 34, members 4 of Figure 1 correspond to the claimed "spherically-shaped protrusions".

With regard to claim 25, the members 4 can be fixed to the member 7b.

With regard to claim 26, the members 4 can merely be received within pockets of member 7b but not fixed thereto.

With regard to claim 27, members 5 in Figure 3 correspond to the claimed "circular disk-shaped bodies" which can be fixed to member 7b.

With regard to claim 28, the members 5 can be separate from member 7b and not fixed thereto as shown in Figure 3.

With regard to claim 29, member 3b as shown in Figure 5a corresponds to the claimed "membrane that covers said plural openings", which member can be fixed to member 7b.

With regard to claim 30, member 3b can also be not fixed to member 7b as shown in Figure 5a.

With regard to claim 21, member 7a along with members 4 as shown in Figure 1, members 5 as shown in Figure 3, or member 3a as shown in Figure 5a, correspond to the claimed "another closure member", and the "plural fasteners" correspond to fasteners 11 which pass through holes in 7b, 2 and 7a as shown in Figures 1 and 3.

With regard to claim 35, the members 4 and 5 correspond to the claimed protrusions, and each of these members 4, 5 has a diameter which is greater than a corresponding diameter or width of the openings 1 as shown in Figures 1 and 3, respectively.

And, with regard to claim 33, features 14 as shown in Figures 5a and 5b correspond to the claimed "protruding profiles", wherein a width or diameter defined by these protruding profiles is greater than a corresponding diameter or width of the openings 1.

The above correspondence between the claims and the drawings is clearly established by the specification as originally filed.

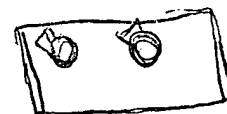
In view of the above significance and description of the invention, along with specific reference of the claimed features to the drawings, it is respectfully submitted that the drawings are sufficient to exhibit the claimed invention and that the specification is fully enabling with regard to 35 U.S.C. 112, first paragraph. Accordingly, it is respectfully requested that the objection to the drawings and the 35 U.S.C. 112, first paragraph, rejection be withdrawn.

Even though claimed features have been corresponded to specific features of the drawings, this has been done solely to aid the Examiner in fully appreciating the invention, and the claimed features are not to be limited to the specific features as shown in the drawings.

In section 5 on page 3 of the Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. By the current Amendment, claims 1-17 have been cancelled and claims 18-35 have been added. Claims 18-35 have been drafted taking into account the 35 U.S.C. 112, second paragraph, concerns expressed by the Examiner and are believed to be in compliance with 35 U.S.C. 112, second paragraph. Specifically, the terms "permanently", "wholly or partly", "central", "similar", "may" and "loosely" are no longer recited in the claims. However, the term "reaction chambers" is believed to be definite and clear to one having ordinary skill in the art, and accordingly, this term has not been deleted from the claims.

In section 6 on pages 4-6 of the Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. 103(a) as being unpatentable over Zwingenberger et al. in view of Black. This rejection is respectfully traversed and Zwingenberger et al. and Black are not applicable with regard to the newly added claims for the following reasons.

Claim 18 recites a pressure and temperature reactor vessel comprising
a block defining plural openings that are closed at one end...a closure
member to seal said plural openings in a **pressure tight manner**...and
a **locking device to force said closure member against said block**...
whereby the sealed plural openings define plural reaction chambers
(emphasis added).



Neither Zwingenberger et al. nor Black either taken alone or in combination teach or suggest such a temperature and pressure reactor vessel.

In this regard, Zwingenberger et al. describes an autoclave system that comprises a single container 10 including a perforated receiving plate 12 for receiving and treating medical instruments. This system allows sterilization of the medical instruments by the passage of steam via the feed line 18 which is condensed through the outlet 16. Though the contents of the container 10 are sealed from the atmosphere by seals, the contents of the container are exposed to steam via the feed line 18 and the condensed steam in the outlet 16. This is necessary for the proper functioning of the system,

which is for sterilizing medical instruments, and must have a means of delivering steam into the container 10.

However, this is in contrast to the claimed invention, in which the entire contents of each and every one of the plural reaction chambers are sealed from one another, sealed from the atmosphere and sealed from other components of the apparatus. Thus, in the system of Zwingenberger et al. if reactant species are filled into the container 10, this mixture will be transported via the vapor phase to all portions of the apparatus, including the feed line and outlet line, and will eventually condense on the surfaces of all portions of the apparatus, thereby making recovery of any eventual product difficult.

Accordingly, even though Zwingenberger et al. can arguably be said to disclose a block 112 defining plural openings, i.e. the perforations therethrough, these perforations are **not** "closed at one end", nor is a closure member and locking device provided to close an open end of the perforations such that "plural reaction chambers" are defined by the perforations. Thus, claim 18 is not anticipated by Zwingenberger et al.

Black describes an autoclave with an access door that provides a pressure tight seal of the contents of the autoclave with regard to the atmosphere. In Figure 3, an example of three trays 10 is shown, which can be withdrawn from the main chamber; however, the contents of these trays are open to the entire chamber, which is important for the correct operation of the apparatus of Black, since the apparatus is to be applied for sterilizing purposes. For the correct functioning of the apparatus as described in Black, it is important that steam delivered through inlet pipe 26 is able to contact the contents of all trays 10 in the main chamber.

This is in contrast to the claimed invention in which for the correct function, it is important that the contents of each and every individual chamber be sealed from the atmosphere and each other. Thus, in the apparatus of Black, reactants that are placed in the separate trays 10 will eventually become mixed through transport via the vapor phase, thereby making the results meaningless.

Accordingly, like Zwingenberger et al. Black does not disclose or suggest "plural reaction chambers". Thus, any combination of Zwingenberger et al. and Black would not result in the

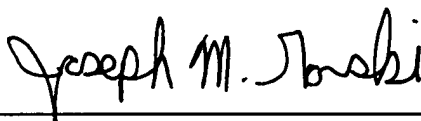
invention as recited in claim 18. Accordingly, claims 18-35 are allowable over Zwingenberger et al. and Black either taken alone or in combination.

In view of the above amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and an early Notice of Allowance is earnestly solicited.

If after reviewing this Amendment, the Examiner believes that any issues remain which must be resolved before the application can be passed to issue, the Examiner is invited to contact the Applicants' undersigned representative by telephone to resolve such issues.

Respectfully submitted,

Duncan AKPORIAYE et al.

By: 

Joseph M. Gorski
Registration No. 46,500
Attorney for Applicants

JMG/lah
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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